ENVIRONMENTAL ASSESSMENT

MINNKOTA LUND STATION 230 kV

HIGH VOLTAGE TRANSMISSION LINE PROJECT

EQB Docket No. 05-93-TR-MINNKOTA

Prepared by:
Minnesota Environmental Quality Board
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List of Acronyms and Abbreviations Used in this Document

BMP	best management practice
COE	United States Army Corps of Engineers
DNR	Minnesota Department of Natural Resources
EMF	electromagnetic field
EA	Environmental Assessment
EQB	Minnesota Environmental Quality Board
HVTL	high voltage transmission line
kV	Kilovolt
MDH	Minnesota Department of Health
MPCA	Minnesota Pollution Control Agency
NESC	National Electrical Safety Code
NWI	National Wetlands Inventory
ppm	parts per million
PWA	Public Water Access
PWI	Public Waters Inventory
ROW	Right-of-Way
RUS	Rural Utility Service
SHPO	State Historic Preservation Office
USFWS	United States Fish and Wildlife Service
WCA	Wetland Conservation Act
WMA	Wildlife Management Area

1.0 Introduction

On March 21, 2005, Minnkota Power Cooperative (Minnkota) submitted to the Minnesota Environmental Quality Board (EQB) a route permit application[1] (Application) regarding a proposal to construct a new substation and a high voltage transmission line (HVTL) in Lake of the Woods County, near Baudette, Minnesota. The Application and other project information is posted on the EQB website: http://www.eqb.state.mn.us/Docket.html?Id=16584

1.1 Project Location

The Project will be located in Lake of the Woods County in Sections 19 and 30 in Township 160N, Range 30W, and in Section 24 in Township 160N, Range 31W. The project is located approximately three miles south of Baudette, Minnesota. A project vicinity and location map is included as Figures 1 and 2 on pages 15 and 16 of this document.

1.2. Project Description

The project includes the following six primary components:

1. "Construction of a new 230/69 kV substation, to be named the "Lund Substation." The substation will occupy approximately 3.6 acres of land in the SW¼ SW¼ of Section 19, Township 160N, Range 30W."
2. "Construction of two new 230 kV single circuit HVTLs in parallel. The new lines will be approximately 0.5 miles long and will extend north from the existing Minnkota (Moranville to Running) 230 kV HVTL, terminating at the new Lund Substation. The easternmost transmission line will be 90 feet from the westernmost line. The average span length between structures will be approximately 600 feet. The height of the proposed structures will be approximately 70 feet."
3. "A new single circuit 69 kV transmission line will be constructed between the new Lund Substation and the existing Minnkota (Warroad to Littlefork) 69 kV transmission line. The transmission line will be approximately 0.1 miles in length."
4. "Approximately 1.5 miles of the existing Minnkota (Warroad to Littlefork) 69 kV single circuit transmission line will be removed between the Lund Substation and the Spooner Switch. This section of the (Warroad to Littlefork) 69 kV single circuit transmission line will be replaced with a double circuit 69 kV transmission line."
5. "Installation of approximately 1.2 miles of buried fiber optic cable primarily within the existing (Warroad to Littlefork) 69 kV transmission line right-of-way (ROW). Approximately 400 feet of new ROW will be required. The fiber optic cable will connect the new Lund Substation to an existing radio tower."
6. "Removal of an existing Baudette tap switch (Spooner Switch) on the Minnkota (Warroad to Littlefork) 69 kV transmission line."

[1] Minnkota Power Cooperative, "Application to the Minnesota Environmental Quality Board for a Route Permit: Lund Substation and 230 kV Line Tap Project" EQB Docket # 05-93 TR- Minnkota , by HDR Consultants

1.3 Project Purpose

"Minnkota owns most of an existing 230 kV HVTL that runs approximately 110 miles between the Moranville substation (located near Warroad, MN) and the Running substation (located near Littlefork, MN). From these two substations, Minnkota serves five distribution substations on nearly 110 miles of a 69 kV system between Warroad and Littlefork. The 230 kV transmission line and the 69 kV are not interconnected at any point. Most of this system is more than 40 years old."

As power use and concerns about system reliability in the Lake of the Woods area have grown, the system has become more vulnerable to an outage event. This project was determined by Minnkota to be the most cost-effective way to fortify the transmission grid in the region.

1.4 Sources of Information

Much of the information contained within this document was provided by the applicant or the applicant's representatives (HDR) in the form of the Application for the Lund substation and 230 kV Line Tap Project and subsequent correspondence. Additional sources of information are listed below:

- Minnesota Pollution Control Agency (http://www.pca.state.mn.us/)
- Minnesota Department of Natural Resources (http://www.dnr.state.mn.us/index.html)
- Minnesota Department of Health (http://www.health.state.mn.us/)
- Minnesota Public Utilities Commission (http://www.puc.state.mn.us/index.htm)
- U. S. Environmental Protection Agency (http://www.epa.gov/)
- Electric Power Research Institute (http://www.epri.com/default.asp)
- U. S. Department of Agriculture Natural Resources Conservation (http://soils.usda.gov/about/)
- Minnesota Geological Survey (http://www.geo.umn.edu/mgs/)
- Department of Administration, State Demographic Center (http://www.demography.state.mn.us/)
- EQB Docket No. 05-93-TR-Minnkota (http://www.eqb.state.mn.us/Docket.html?Id=16584)
- U. S. Department of Energy, Energy Information Administration (http://eia.doe.gov/)

2.0 Regulatory Framework

2.1 EQB Permit Requirement

"No person may construct a high voltage transmission line without a route permit from the Environmental Quality Board or the appropriate local unit of government."(Minn. Stat. § 116C.57 Subd. 2). "A high voltage transmission line is defined as any transmission line capable of operating at a voltage of 100 kV or greater." (Minn. Stat. § 116C.52 Subd. 4)

2.2 Environmental Assessment Requirement

For projects of the size involved here, the EQB is required to prepare an Environmental Assessment (EA). The EA contains information on the human and environmental impacts of the proposed project and addresses methods to mitigate such impacts. The EA is the only state environmental review document required to be prepared on the project by the EQB.

2.3 Scoping of Environmental Impacts and Alternative Routes

In accordance with the rules applicable to this matter, the EQB held a public information meeting in Baudette on April 26, 2005. This meeting provided the public with an opportunity to learn about the proposed project, to suggest other route alternatives, modify the draft scoping document and to identify concerns that should be considered by the EQB staff in preparing an EA. Public comments on the scope of the EA were accepted until May 9, 2005. Robert A. Schroeder, Chair of the EQB, issued a Scoping Order for the Minnkota Lund 230 kV project on May 16, 2005 (**Appendix A**).

Because of the size and type of the project and the remoteness of the project location, no significant environmental impacts are anticipated. No person has raised any concerns about the project. Therefore, the discussion in this Environmental Assessment of the potential impacts is taken primarily from the Application and field observations of EQB Project staff.

Minnkota did identify several other options for addressing the reliability and load concerns in the Lake of the Woods area but rejected those for cost and other reasons. These options are all discussed in the Application. The EQB has not included in this document a discussion of any alternatives to the proposed project nor has it included any alternative routes for the proposed transmission lines or any proposed alternative sites for the substation.

2.4 Certificate of Need

"A proposed 230 kV line normally requires a certificate of need from the Minnesota Public Utilities Commission," Minn. Stat. § 216B.2421, subd. 2(2), "but a 230 kV line of one mile or less required to connect a new substation to an existing high voltage transmission line, like the line proposed here, is exempt from the Certificate of Need requirement." Minn. Stat. § 216B.243, subd. 8(4).

3.0 Assessment of Impacts and Mitigation

Minnkota will manage the HVTL and substation construction in a manner to minimize negative environmental impacts. Minnkota will restore any temporary construction damage to as near to original conditions as practicable. Invariably there will be minor disruptions as part of the project. From a practical perspective, this is a small project in a largely uninhabited and undeveloped area that has only minimal impacts. No one in the area has objected to the transmission improvements and the project provides a substantial increase in electrical system reliability in the region. Additional detail on project impacts and mitigation measures can be found in the Application.

3.1 Description of Environmental Setting

The proposed Project is located approximately five miles south of the town of Baudette, Minnesota. It is located adjacent to the Carp Swamp Wildlife Management Area (WMA). The local Minnesota Department of Natural Resources (DNR) office staff indicated no concerns about the project being adjacent to a WMA.

According to the DNR Ecological Classification System, the project is located in the Agassiz lowlands. This area is dominated by peatlands and encompasses a portion of the Glacial Lake Agassiz. There are several active gravel pits along the Minnkota (Warroad to Littlefork) 69 kV transmission line and a sawmill within the Project area west of Highway 72.

3.2 Impacts on Human Settlement

3.2.1 Socioeconomic

The local economy is based primarily on tourism, manufacturing, agriculture and timber. The region is sparsely settled outside of the town of Baudette. Between 10 and 15 workers will be required for the construction of the 230 kV HVTLs and an additional 10 to 15 workers will be required for construction of the 69 kV transmission lines. During construction, there will be a small positive impact on the local community due to the additional revenue created from expenditures of the construction crews in the local community. Construction and installation crews are expected to purchase local community services, hotels, restaurants, and materials such as concrete and rock. It is not expected that additional permanent jobs will be created by this Project. No mitigative measures for socioeconomic impacts are necessary.

3.2.2 Displacement

The construction of the project on the preferred site would not result in displacement of any person. Minnkota has executed a purchase agreement for the purchase of the substation property. Minnkota will also be negotiating for utility easements after the final route permit is issued. Therefore there will not be any impacts and mitigative measures are not necessary.

3.2.3 Noise

Transmission conductors produce noise under certain conditions because of corona discharge. Corona discharge is the ionization of the air next to the conductor by the electric field which is related to the voltage on the conductors. The loudness of the noise depends on distance to residence, conductor conditions, voltage level, and weather conditions. Generally, the noise level during operation of a transmission line is minimal and well below the state noise standards.

The noise from the proposed lines will be nearly the same as the existing line. The substation will have some additional noise from facility operations. The nearest residence is 1600 feet away from the substation. The new transmission lines will not add significantly to the existing noise levels. Mitigative measures are not necessary since the noise impacts are not significant.

3.2.4. Aesthetics

The high voltage transmission lines will consist of two, 230 kV lines about 2600 feet long that will be placed approximately 90 feet apart from one another. The structures will be about 70 feet tall and the span between structures will average 600 feet. These structures will be visible from a number of vantage points.

Motorists along Highway 72 will be able to observe the HVTL structures. Recreational users of the Carp Swamp WMA will be able to see the transmission line and the structures. There is one home approximately 1600 feet to the north of the substation. Residents of this home will be able to see the transmission lines and the structures. No significant impact to the viewshed in the area will result from construction of the lines. There are no features in any direction that will be obscured by the transmission line or the power poles.

The substation will also be within sight of motorists and hunters and residents in the area. The structures carrying the transmission lines will be the tallest structures near the substation.

The short 69 kV lines that will be constructed will also be visible to persons in the area. The new poles will be 15 to 20 feet taller than the existing poles but this additional height is not expected to cause any noticeable change in the visual presence of the lines.

3.2.5 Human Health and Safety

Minnkota states that the transmission lines and all associated facilities will be designed and constructed to comply with all applicable standards, including standards of the Rural Utilities Service (RUS) and the National Electric Safety Code (NESC) for such features as clearance to ground, strength of materials, and right-of-way (ROW) widths.

The proposed transmission line will be equipped with protective devices to safeguard the public from the transmission line if an accident occurs and a structure or conductor falls to the ground. The protective equipment would de-energize the line when an event occurred. In addition, the substation facilities will be fenced, and access will be limited to authorized personnel.

Electric and Magnetic Fields

Electric and magnetic fields (EMF) arise from the flow of electricity and the voltage of a line. The intensity of the electric field is related to the voltage of the line and the intensity of the magnetic field is related to the current flow through the conductors.

Many years of research on the biological effects of electromagnetic fields have been conducted on animals and humans. No association has been found between exposure to EMF and human disease. While the consensus is that EMF poses no risk to humans, the question of whether exposure to EMF can cause biological responses or even health effects continues to be the subject of medical research and public debate.

In 2002, Minnesota formed an Interagency Working Group to evaluate the body of research and develop policy recommendations to protect the public health from any potential problems resulting from HVTL EMF effects. The Working Group consisted of staff from the Department of Health, the Department of Commerce, the Public Utilities Commission, the Pollution Control Agency, and the Environmental Quality Board. The Department of Health coordinated the activities of the Working Group.

In September 2002, the Working Group published its findings in a White Paper on Electric and Magnetic Field (EMF) Policy and Mitigation Options (hereinafter “White Paper”). The Minnesota Department of Health made the following statement in the “White Paper”:

> "The Minnesota Department of Health concludes that the current body of evidence is insufficient to establish a cause and effect relationship between EMF and adverse health effects. However, as with many other environmental health issues, the possibility of a health risk from EMF cannot be completely dismissed. The uncertainty surrounding EMF health effects presents a difficult context in which to make regulatory decisions. This approach suggests that one should avoid any activity or exposure about which there are questions of safety or health, at least to the extent that an activity can be avoided easily or cheaply."

Additional discussion of EMF can be found in the Department of Health White Paper and in other environmental reviews prepared by the Environmental Quality Board on proposed transmission lines. See, for example, EQB Dockets 03-64-TR-Xcel (161 kV line in Jackson and Martin Counties), 03-73-TR-Xcel (345 kV line in southwest Minnesota, and 04-81-TR-Air Lake (a 115 kV line in Dakota County). These documents are all available on the EQB webpage.

There is no state or federal standard for transmission line electric fields. However, in previous cases, the EQB has imposed in its transmission line permits, a maximum electric field limit of 8 kV/meter measured one meter above the ground. The restriction was designed to prevent serious hazard from shocks when touching large objects like a bus or combine parked under high voltage transmission lines.

Nor does Minnesota have a standard for magnetic fields. The EQB has recognized in other transmission line proceedings that two states have established standards for magnetic fields – Florida (a 150 milligauss limit) and New York (a 200 milligauss limit).

Minnkota has modeled the electric and magnetic fields that might be found with the proposed 230 kV transmission line. The results of this modeling are shown on page 23 of the Application The maximum electric field expected from the transmission line immediately below the line is 1.25 kilovolts per meter, well within the 8 kV/meter allowed by the EQB. The maximum magnetic field is 74.11 milligausses, only half of the Florida standard.

3.3 Impacts on Land-based Economies

3.3.1 Recreation

Recreational opportunities near the Project include Carp Swamp WMA that will be crossed by the proposed 69 kV transmission line on existing transmission line ROW. The WMA is a large wetland complex and has two snowmobile trails that traverse it, including the Baudette-Norris Trail. Wildlife management areas provide recreation opportunities to upland, waterfowl, and deer hunters and provide excellent bird watching opportunities. These areas are also managed for wildlife production.

Physical impacts will occur to the Carp Swamp WMA due to the placement of transmission line poles. There is currently a transmission line that follows the ROW that will be occupied by the transmission line. The 230 kV HVTLs will be visible to individuals using this resource. The existing 230 kV line currently bisects the WMA east to west . It is not anticipated that the new 230 kV HVTLs will alter the visual character of the area to a greater extent than the existing transmission lines. To the extent possible, Minnkota will follow existing transmission and

highway corridors to minimize the impacts to the recreation in the area. Negative impacts to public recreational areas are not anticipated from the project and no mitigation is necessary.

3.3.2 Prime Farmland

There are no prime farmlands along the proposed transmission line route, so impacts to agricultural areas are not anticipated. The land is not currently farmed, so no land will be taken out of production and no mitigation measures are required.

3.3.3 Transportation

The Lake of the Woods County Highway Department measured daily traffic levels on county and state highways near the project area in November 2000. Traffic levels were as follows:

Traffic Measurement Area	Level (vehicles/day)
North on Minnesota. Hwy. 72 from Washkish	360
South on Minnesota Hwy. 72 from Baudette	310

The project is located off Minnesota Highway 72. Impact on traffic congestion is not anticipated during operation. There may be a slight impact on traffic levels during construction. Because traffic levels may only be slightly, but insignificantly, impacted during construction with no impacts anticipated during facility operation, no mitigation will be required.

3.3.4 Mining and Forestry

The Minnesota DNR Division of Land and Minerals has indicated that there is no mineral mining or areas of potential mines along the proposed transmission line corridor. There is no forestry in the immediate project area. The trees and shrubs will be cleared in this area to insure transmission line safety and reliability. No mitigation measures are deemed necessary.

3.3.5 Archaeological and Historic Resources

The State Historic Preservation Office (SHPO) reviewed the proposed project area for potential archaeological and/or historical resources. The SHPO indicated in a letter dated February 17, 2005, that there were "no properties known or suspected properties that may be eligible for listing on the National Register of Historic places likely to be affected by this project" No impact is anticipated. If historic or archaeological resources are found during construction, Minnkota will stop work until an archaeologist can be consulted.

3.4 Natural Environment

3.4.1 Air Quality

"During project construction, there will be emissions from vehicles and construction equipment and fugitive dust from right-of-way clearing. Temporary air quality impacts caused by the proposed construction-related emissions are expected to occur. Fugitive dust may result from replacing the existing structures and from any ROW clearing required. The magnitude of these emissions is influenced heavily by weather conditions and the specific construction activity taking place. Exhaust emissions from diesel equipment will vary during construction, but will be minimal and temporary. There will be no significant adverse impacts to the surrounding environment because of the short and intermittent nature of the emission and dust-producing

construction phases. No air quality mitigation measures are necessary for the construction of the transmission lines. There will be no impact on air quality during operation of the lines."

3.4.2 Water Quality, Soils and Geology

The Project is located in the Rainy River – Baudette watershed in the Rainy River basin. The area south of Baudette is a largely contiguous wetland area covering hundreds of square miles, all ultimately interconnected and draining to the Lake of the Woods-Rainy River-Rainy Lake watershed. The surface water resources that could be affected by the construction of the transmission lines and substation construction include an unnamed wetland to the south of the substation, Carp Swamp WMA to the west of the substation, and unnamed tributaries to the northeast of the substation. Carp Swamp WMA and all the large wetlands in the immediate area of the HVTL and substation drain to the Baudette River.

"The uppermost aquifer consists of confined units located within the area's glacial drift deposits. The glacial deposits are composed of lake-modified tills that are high in clay content. Due to the high clay content of the glacial material and the presence of confining units, the aquifer's susceptibility to contamination is likely low to moderate. The potentiometer surface in the aquifer is approximately 1075-ft above mean sea level. Regional groundwater flow is directed northeast from the project site toward the Rainy River."

During construction there is a possibility of sediment reaching surface waters as the ground is disturbed by excavation, grading, and construction traffic. A Storm Water Pollution Prevention Plan will be developed and will minimize erosion and sedimentation at the site. Best Management Practices such as the use of hay bales, sediment control fence, and seeding and mulching will be implemented. Additionally, a Spill Prevention, Control and Countermeasure plan will be developed to protect water quality in the area.

There should be no long-term change in runoff due to the transmission lines or substation. Once the construction is complete, it will have no further impact on surface water quality. Long-term mitigation measures are not necessary.

3.4.3 Groundwater and Wetlands

"The proposed transmission lines will cross several wetland complexes identified on the National Wetland Inventory (NWI) maps of the U.S. Fish and Wildlife Service (USFWS). These wetlands are all palustrine and include emergent, forested and scrub-shrub types. Water tables for these areas are near the surface during the spring, but generally fall through the summer. No regulated Public Waters are identified for the project area on the Public Water Inventory (PWI) maps." The entire project area is adjacent to the northern edge of the Red Lake Bog of north central Minnesota. The groundwater throughout the entire area is very close to the surface. It is not anticipated that this project will influence the groundwater quality or the large regional wetland.

"Minor impacts may occur to wetlands identified on the NWI maps underneath the proposed 230 kV HVTLs and adjacent to the existing 69 kV transmission line. The substation construction may affect small emergent and scrub shrub wetlands due to project construction, according to the NWI maps. Minnkota held discussions with the United States Army Corps of Engineers (COE) and the Lake of the Woods County, which is the designated responsible government unit by the Wetland Conservation Act. There is a possibility that some of the areas that the substation occupies may have reverted to wetland after agricultural abandonment years ago."

Minnkota and County authorities agreed a wetland delineation by a licensed professional would be conducted before substation construction commences. Wetlands impacts have been avoided to the extent practicable. Minnkota chose a substation location that minimized impacts to wetlands. Minnkota will construct the 230 kV HVTLs in the winter months to minimize impacts to the wetlands. The 69 kV transmission lines will be constructed along the existing ROW. No additional wetland impacts are expected due to the double circuit 69 kV transmission line construction. Minnkota will obtain all necessary wetland permits from the COE, DNR, and Lake of the Woods County prior to project construction.

3.4.4 Fish and Wildlife Resources

"The Carp Swamp WMA provides habitat for many animal species. Animals typically found in bog and peatland areas include shrews, voles, bog lemmings, and red squirrels. Bird species that prefer bogs include warblers, sparrows, hermit thrushes, yellow-bellied flycatchers, and dark-eyed juncos. Amphibians and reptiles are uncommon in these areas. A list of mammals, birds, and amphibians that have been previously identified in Lake of the County is found in Appendix D of the Route Permit Application. There is a potential for temporary displacement of wildlife during construction and loss of small amounts of habitat from the Project due to pole placement."

"The Carp Swamp WMA is bog habitat approximately 14,000 acres in size. If animals are displaced, they are likely to move a short distance in the short term. Raptors, waterfowl, and other bird species are commonly affected by the construction and placement of transmission lines. Avian collisions are possible after completion of the transmission line. Waterfowl are typically more susceptible to collision, especially if the line is placed between wetlands that serve as resting areas. Additionally, electrocution of large birds, such as raptors, is a concern related to distribution lines. Electrocution occurs when birds with a large wingspan encounter either two conductors, or a conductor and a grounding device."

Minnkota will utilize transmission designs that minimize impacts to raptors and other birds that are at risk for electrocution if proper design standards are not implemented. A fence will be installed surrounding the substation, minimizing wildlife access. Permanent impacts to other fauna in the project area are not anticipated; therefore additional mitigative measures are unnecessary.

3.4.5 Vegetation

"Flora that the 230 kV HVTLs will cross is most likely to be black spruce swamp and emergent wetland vegetation. A black spruce swamp canopy is typically dominated by black spruce, tamarack, and white cedar. The ground layer is dominated by sedges (*Carex spp*.), cotton grasses (*Eriophorum spp*.), and ericaceous shrubs (Labrador tea, bog rosemary, swamp laurel, creeping snowberry), with a moss layer dominated by feather mosses and mixed with *Sphagnum.* Approximately 210 feet to the west of the proposed transmission line, across Highway 72, the vegetation shifts to an open bog. Open bogs typically have less tree cover but typically have many of the ground layer species in a black spruce swamp. In addition, species such as sundew (*Drosera rotundifolia*) and pitcher plant (*Sarracenia purpurea*) are characteristic of this community. Open bogs also typically have a continuous mat of sphagnum mosses, usually dominated by *Sphagnum magellanicum* or *S. angustifolium*."

The new Lund Substation will be constructed on what is designated as fallow agricultural land. The substation will not displace vegetation in a native plant community. The land is currently fallow and was used for agriculture in the past. During this time of fallow, enough wetland vegetation may have moved into the area that the site has reverted to wetland vegetation. In this case, approx. 3.6 acres of vegetation may be impacted. This land type change must be verified by a detailed on-site investigation by a licensed professional soil classifier. All parties have agreed to this requirement prior to substation construction

The 230 kV HVTLs will cause a permanent impact to vegetation of approximately 0.02 acres. Temporary impacts will be approximately 1.9 acres during construction of the line. Vegetation, such as trees, will be removed that could potentially affect the safe operation of the transmission lines. Minnkota will use water and soil conservations practices such as containing excavated material, protecting exposed soil, and stabilizing restored soil for the Project. To minimize temporary impacts Minnkota proposes to construct the 230 kV HVTLs during the winter and utilize existing ROW when possible. Tree removal will be minimized to the extent practicable.

3.5 Rare and Unique Natural Resources

"On January 19, 2005, Minnkota requested the DNR to review of the Project for possible effects to threatened and endangered species and rare natural features within the Project area. On February 1, 2005, the DNR replied identifying one known occurrence within a one-mile radius of the Project. The record is a short eared owl (*Asio flammeus*) a species of special concern. Although this species is not endangered or threatened, it is extremely uncommon in Minnesota, or has unique or highly specific habitat requirements and deserves careful monitoring of its status."

Based on the letter from the DNR and discussions with the DNR Area Wildlife Manager, no impacts to this species are anticipated. Since no impacts are anticipated, no mitigation is necessary.

4.0 REGULATORY PERMITS AND APPROVALS REQUIRED

Table 1 below shows the permits potentially required for the Project.

Table 1 - Potential Required Permits

Permit	Jurisdiction
Local Approvals	
Road Crossing Permits	Lake of the Woods County
Lands Permit	Lake of the Woods County
Building Permits	Lake of the Woods County
Over-width Loads Permits	Lake of the Woods County
Driveway/Access Permits	Lake of the Woods County
State of Minnesota Approvals	
Route Permit (Alternative Process)	EQB
Section 401 Certification	MPCA
Wetland Conservation Act/Permit Application for Public Utility Projects	DNR, LGU (Lake of the Woods County)
NPDES Permit	MPCA
Utility Permit	Mn/DOT
Drainage Permit	Mn/DOT
Access Driveway permit	Mn/DOT
License to Cross Public Lands	DNR
Federal Approvals	
RUS Environmental Report	Rural Utilities Service
Section 404 Permit (GP/LOP-98-MN)	U.S. Army Corps of Engineers
Section 106 Review	Lead Federal Agency
Section 7 Consultation	USFWS

Detailed information on these permits and other project information can be found in the Application **and** at the EQB website http://www.eqb.state.mn.us/Docket.html?Id=16584

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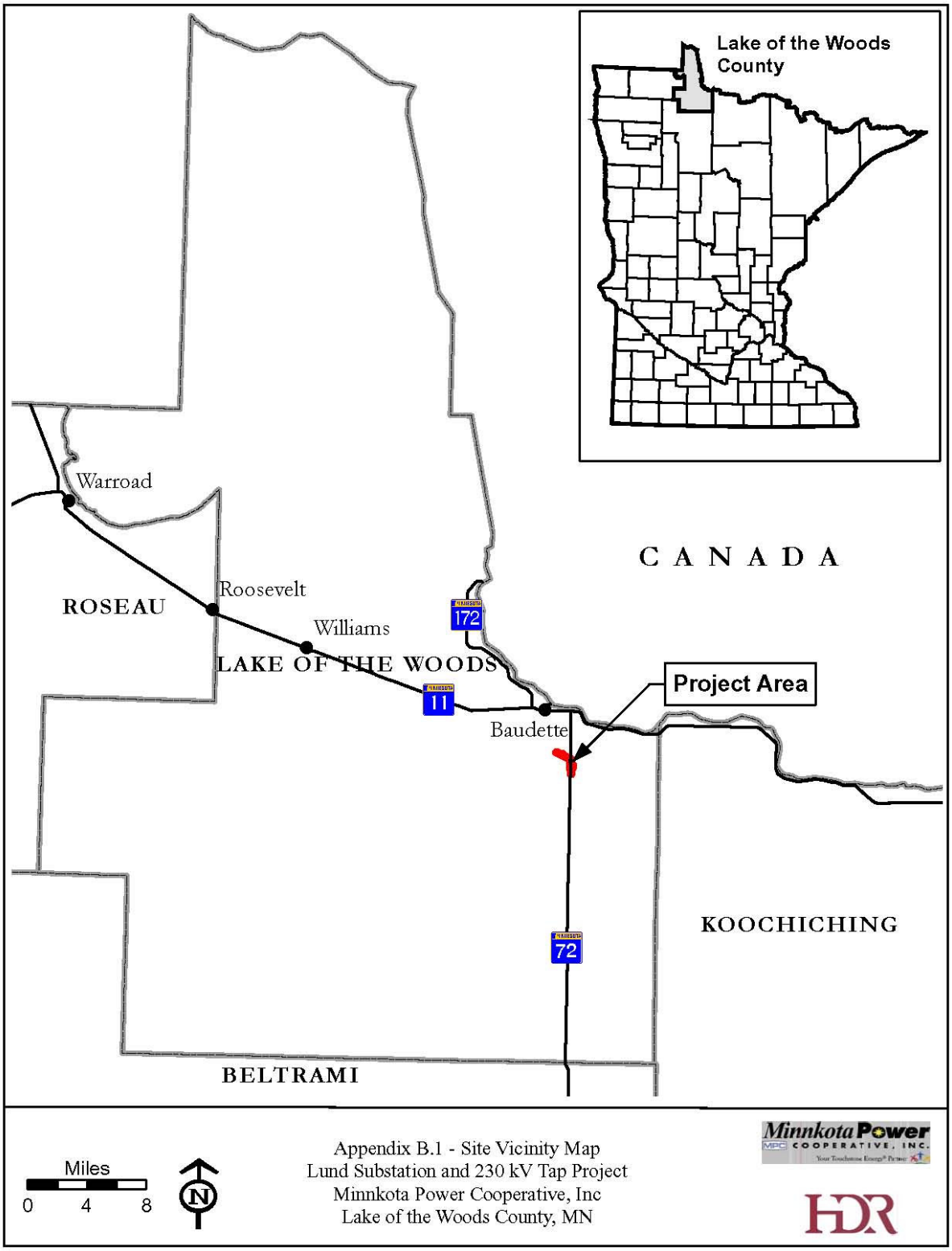
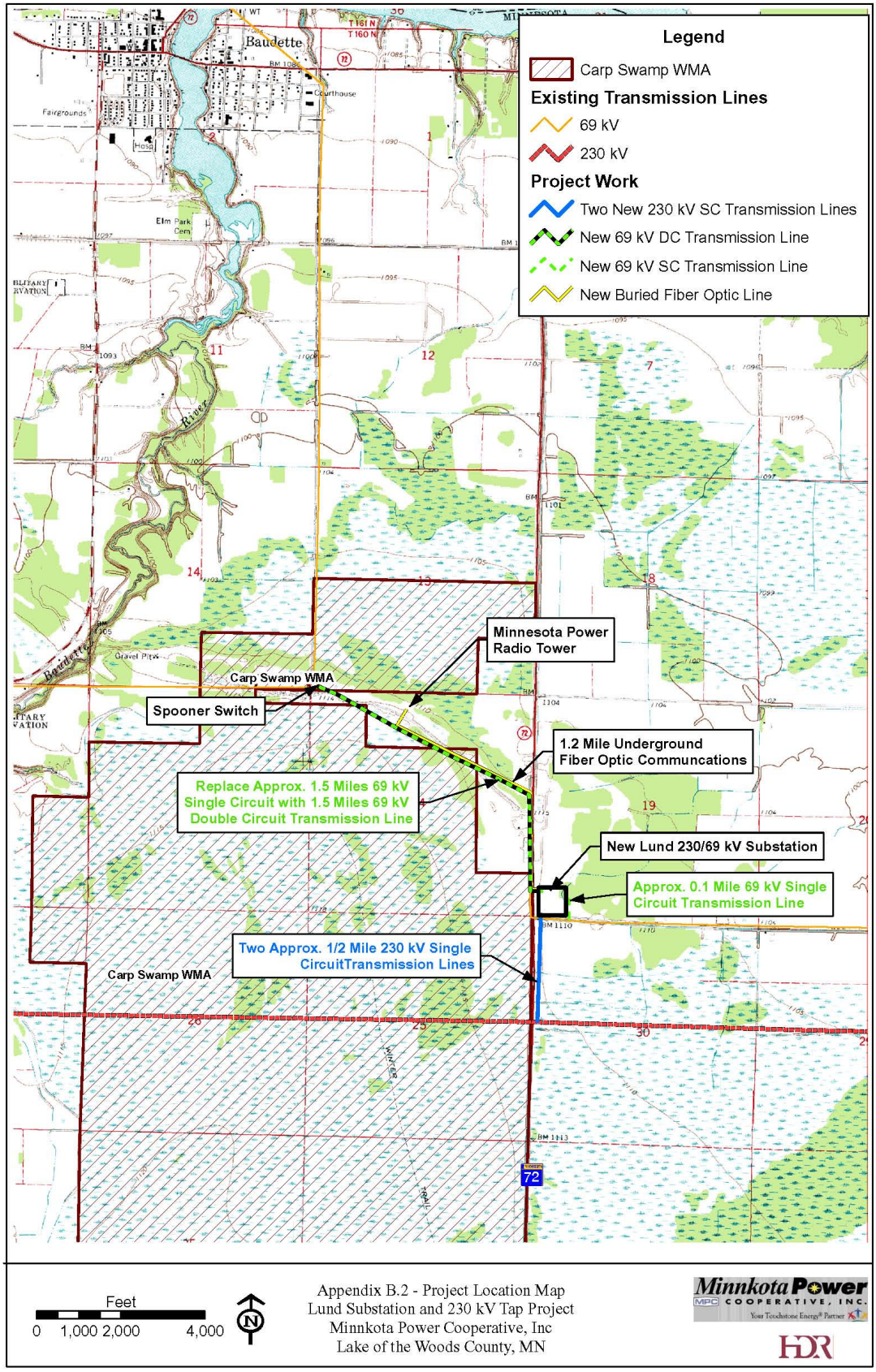

Lake of the Woods County
Warroad
CANADA
ROSEAU
Roosevelt
Williams
LAKE OF THE WOODS
172
11
Project Area
Baudette
72
KOOCHICHING
BELTRAMI
Miles
0 4 8
N
Appendix B.1 - Site Vicinity Map
Lund Substation and 230 kV Tap Project
Minnkota Power Cooperative, Inc
Lake of the Woods County, MN
Minnkota Power
COOPERATIVE, INC.
HDR



Appendix B.2 - Project Location Map
Lund Substation and 230 kV Tap Project
Minnkota Power Cooperative, Inc
Lake of the Woods County, MN

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STATE OF MINNESOTA

ENVIRONMENTAL QUALITY BOARD

In the Matter of Minnkota Power Cooperative Application for a Route Permit for the MINNKOTA LUND 230 kV HVTL project.	**ENVIRONMENTAL ASSESSMENT SCOPING DECISION EQB Docket No. 05-93-TR-Minnkota Lund 230 kV High Voltage Transmission Line**

The above-entitled matter came before the Chair of the Minnesota Environmental Quality Board (MEQB) for a decision on the scope of the Environmental Assessment (EA) to be prepared on the proposed Minnkota Lund 230 kV HVTL project.

The EQB held a public meeting on April 26, 2005, in Baudette, Minnesota to discuss the project with the public and to solicit input into the scope of the EA to be prepared. The public was given until May 9, 2005 to submit written comments regarding the scope of the EA.

Having consulted with the EQB staff, I hereby make the following Scoping Order.

MATTERS TO BE ADDRESSED

The EA on the Minnkota Lund 230 kV HVTL project will address the following matters:

1.0 INTRODUCTION
- 1.1 Project Description
- 1.2 Project Location
- 1.3 Project Proposal
- 2.3 Sources of Information

2.0 REGULATORY FRAMEWORK
- 2.1 EQB Permit Requirement
- 2.2 Environmental Assessment Requirement
- 2.3 Scoping of Environmental Impacts and Alternative Routes

3.0 ASSESSMENT OF IMPACTS AND MITIGATION
- 3.1 Description of Environmental Setting
- 3.2 Impacts on Human Settlement
  - 3.2.1 Socioeconomic
  - 3.2.2 Displacement
  - 3.2.3 Noise
  - 3.2.4 Aesthetics
  - 3.2.5 Human Health and Safety

3.3 Impacts on Land-based Economics
- 3.3.1 Recreation
- 3.3.2 Prime Farmland
- 3.3.3 Transportation
- 3.3.4 Mining and Forestry
- 3.3.5 Archeological and Historic Resources

3.4 Natural Environment
- 3.4.1 Air Quality
- 3.4.2. Water Quality, Soils and Geology
- 3.4.3 Groundwater and Wetlands
- 3.4.4 Fish and Wildlife Resources
- 3.4.5 Vegetation

3.5 Rare and Unique Natural Resources

4.0 REGULATORY PERMITS AND APPROVALS REQUIRED

ISSUES OUTSIDE THE SCOPE OF THE EA

The EQB will not, as part of this environmental review, consider the following matter:

1. Whether a different size or different type of transmission line should be built.
2. The no-build option.
3. Any alternative routes for the proposed high voltage transmission line.
4. Any alternative sites for the Lund substation

IDENTIFICATION OF PERMITS

The EA will include a list of permits that will be required for the applicant to construct this project.

SCHEDULE

The EA will be completed by May 16, 2005.

Signed this 16 day of May, 2005

STATE OF MINNESOTA
ENVIRONMENTAL QUALITY BOARD

Robert A. Schroeder, Chair